

**MEMORANDUM**

Date: September 17, 2012

To: Radioactive Material Licensees

From: Julia Schmitt, Office of Radiological Health *JS*

Subject: SCATR Program to Begin Collection of Certain Class A Sources for Disposal

**Important Opportunity to Dispose of Class A Radioactive Sources**

The Source Collection and Threat Reduction (SCATR) Program is reaching out to interested stakeholders to provide information detailing the one-year license variance allowing for the disposal of certain Class A sealed sources at the EnergySolutions' low-level radioactive waste disposal facility in Clive, Utah. The SCATR Program is administered by the Conference of Radiation Control Program Directors (CRCPD).

**The CRCPD is offering financial assistance equal to half the cost of disposal to generators who participate in the effort.**

**This program will only last for one year! You must register any sources you wish to have considered for this program with the Off-Site Source Recovery Project (OSRP) before it can be accepted for disposal.**

Go to <http://osrp.lanl.gov/PickUpSources.aspx> for information about how to register source(s). If you have already registered sources, you are encouraged to update their registration. Attached is additional information regarding this program.

This is a very time sensitive matter. The Nebraska Office of Radiological Health encourages all licensees who have eligible sources that will not be used in the foreseeable future to take advantage of this variance to properly dispose of these types of sealed sources in a cost effective manner.

Attachment

**Source Collection and Threat Reduction (SCATR) Program  
Conference of Radiation Control Program Directors (CRCPD)**

**SCATR Program to Begin Collection of Class A Sources for Disposal at Clive  
Time Sensitive**

*If you have questions or require additional information, please contact Abigail Cuthbertson at (202) 586-2391 or at [abigail.cuthbertson@nnsa.doe.gov](mailto:abigail.cuthbertson@nnsa.doe.gov) or Meaghan Jennison at [meaghan.jennison@nnsa.doe.gov](mailto:meaghan.jennison@nnsa.doe.gov).*

**Opportunity to Dispose of Certain Class A Sealed Sources**

The SCATR Program is providing sealed source licensees in states which do not have access to a low level radioactive waste disposal facility an opportunity to dispose of certain unwanted radioactive sealed sources.

The collection, which is supported by the Department of Energy's Global Threat Reduction Initiative (GTRI), the State of Utah Division of Radiation Control, and EnergySolutions of Utah, will include a range of sealed sources that meet the definition for Class A waste and will last for a period of one year from the date the first waste is received at the Clive, Utah facility.

CRCPD is offering financial assistance equal to half the cost of disposal to generators who participate in the effort.

**Specified Criteria** Only sealed sources which meet the criteria specified below will be considered for the program:

- Each source by itself must meet the definition of Class A waste as defined in 10 CFR 61.55:
  - The quotient of the current activity of the radionuclide in the source divided by the volume of the source cannot exceed the Class A limit as specified in 10 CFR 61.55 tables;
  - This includes any radionuclide not specifically listed in the 10 CFR 61.55 tables with a half-life < 5 years ;
  - Commonly used radionuclides that could qualify for the collection include:

Isotope	Class A Limit	Isotope	Class A Limit	Isotope	Class A Limit
<sup>60</sup> Co	700 microCi/cm <sup>3</sup>	<sup>125</sup> I	700 microCi/cm <sup>3</sup>	<sup>192</sup> Ir	700 microCi/cm <sup>3</sup>
<sup>137</sup> Cs	1 microCi/cm <sup>3</sup>	<sup>109</sup> Cd	700 microCi/cm <sup>3</sup>	<sup>65</sup> Zn	700 microCi/cm <sup>3</sup>
<sup>153</sup> Gd	700 microCi/cm <sup>3</sup>	<sup>133</sup> Ba	unlimited	<sup>204</sup> Tl	700 microCi/cm <sup>3</sup>
<sup>55</sup> Fe	700 microCi/cm <sup>3</sup>	<sup>68</sup> Ge	700 microCi/cm <sup>3</sup>	<sup>22</sup> Na	700 microCi/cm <sup>3</sup>
<sup>57</sup> Co	700 microCi/cm <sup>3</sup>	<sup>152</sup> Eu	unlimited	<sup>54</sup> Mn	700 microCi/cm <sup>3</sup>
<sup>210</sup> Po	700 microCi/cm <sup>3</sup>	<sup>147</sup> Pm	700 microCi/cm <sup>3</sup>	<sup>195</sup> Au	700 microCi/cm <sup>3</sup>

- The sealed source must be registered with the Off-Site Source Recovery Project (OSRP) before it can be accepted for disposal. Licensees may go to <http://osrp.lanl.gov/PickUpSources.aspx> for information about how to register source(s). If sources are already registered, licensees are encouraged to update their registration.

- Each source must be uniquely identified by a serial number or other unique identifier and the site should have ready any documentation available pertaining to a particular source's activity, isotope, and date of manufacture or original assay upon broker's packaging and acceptance of material.
- Other restrictions may apply.

**CRCPD will contact each participant** to verify their sources and confirm their participation in the collection. Licensees will then be contacted by a broker to schedule a date and time for collection of their sources and contract for one-half the quoted cost of disposal.

*For additional information regarding the collection effort, please contact Russ Meyer of CRCPD at (512) 761-3822 or at [rmeyer@crcpd.org](mailto:rmeyer@crcpd.org).*

*Additional information can be found on the attached document.*

### **The Variance**

By letter dated April 11, 2012, the Executive Secretary of the State of Utah's Radiation Control Board approved a variance request for the disposal of Class A sealed sources at the EnergySolution's low-level radioactive waste disposal facility in Clive, Utah. (See *LLW Notes*, March/April 2012, pp. 7-9.)

The variance will last for one year (365 days), starting from receipt of the first shipment at the facility. Only Class A sealed sources recovered as part of a round-up coordinated by CRCPD's SCATR Program are authorized for disposal under the variance.

If any of the below-identified commitments or conditions are not followed, the variance shall be suspended or terminated. For disposal of sealed sources beyond the 12 month variance, EnergySolutions will need to obtain approval through a license amendment of RML UT2300249.

*A copy of the final approval letter and the final public participation summary are attached, for your information and convenience.*

**Commitments** In the variance request, EnergySolutions proposed certain commitments with which the Division of Radiation Control (DRC) concurred as amended:

- Each individual source shall not exceed Class A low-level radioactive waste limits as defined in UAC R313-15-1009 (10 CFR 61). Packages disposed under the variance will also not exceed Class A low-level radioactive waste limits as defined in UAC R313-15-1009 (10 CFR 61).
- EnergySolutions will not seek NRC approval to import foreign sources and will only manage and dispose of domestic sources.
- Shipments shall be certified in accordance with the EnergySolutions' Waste Characterization Plan Exhibit 2. Sources will be packaged in accordance with the 1995 NRC Branch Technical Position paper on encapsulation (1995 BTP).
- Sources will be disposed in the CWF in accordance with the most currently approved Construction Quality Assurance/Quality Control Manual requirements for CWF disposal and other applicable CWF criteria for disposal.
- EnergySolutions will review and approve each shipment before it is transported from the generator's or processor's facility.
- DRC will be notified at least seven (7) calendar days prior to scheduled receipt of the first shipment under the variance.

- The variance will have a term of one year (365 days) from the date the first shipment is received under the variance.
- EnergySolutions will track and report the total number, volume, and activity of sources received and the serial numbers or other unique identification number of each source disposed under the variance. A report will be due no later than three (3) months after the variance expiration date.

**Additional Conditions** After evaluation of EnergySolutions' request, the DRC determined to grant the variance to License Condition 164 with the following additional conditions:

- The sealed source or sources must be encased within the disposal containers with grout or concrete.
- Only sealed sources recovered as part of a round-up coordinated by the CRCPD's SCATR Program are authorized for disposal under the variance.
- The half-lives of the isotopes in the sources to be disposed are equal to the half-life of Cs-137 or less.
- The total number of curies shall be limited to 708,678 curies—which is equivalent to 1% of the calculated total source term limit of the Class A North Embankment.

### **Background**

Currently, License Condition 16A prohibits the disposal of sealed sources at the Clive facility. On August 2, 2011, however, EnergySolutions submitted to the DRC variance request (CDI I-0216) to RML UT 2300249.

In a meeting on August 18, 2011, EnergySolutions presented their request to DRC staff. The request was made in support of the DOE's NNSA GTRI. The GTRI's OSRP recovers and disposes of certain unused sealed sources from civilian sites. The GTRI's OSRP has requested that certain sealed sources be authorized for disposal at EnergySolutions' Clive, Utah facility.

By letter dated October 13, 2011, the Executive Secretary requested additional information from the licensee. In particular, EnergySolutions was asked to provide information demonstrating that the requested variance complies with all requirements stated in Utah Administrative Code (UAC) R313-25-8(l). By letter dated November 7, 2011, the licensee provided information to address each individual requirement in UAC R313-25-8(1).

DRC staff evaluated EnergySolutions response and provided the following comments:

- UAC R313-25-8(1)(a): The DRC agrees that sealed sources were considered by the Nuclear Regulatory Commission (NRC) when developing radioactive waste classification criteria in 10 CFR 61 and therefore is not a unique waste stream. The variance request complies with this requirement.
- UAC R313-25-8(1)(b): The half-lives of the isotopes in the sources to be disposed is equal to the half-life of Cs-137 or less. Therefore the dose limits will not be reached. The variance request complies with this requirement.
- UAC R313-25-8(1)(c): To comply with this requirement, the DRC will allow 1% of the calculated total source term limit (which equals 708,678 curies) of the Class A North Embankment CWF Cell which will ensure compliance with the requirement.

• UAC R313-25-8(1)(d): Sealed sources were considered by the NRC in developing 10 CFR 61. Additionally, sealed sources have been evaluated in the NRC's Branch Technical Position paper on Concentration Averaging and Encapsulation (BTP). Therefore, the form of the waste (i.e. sealed sources verses bulk waste) does not constitute an unanalyzed condition. The variance request complies with this requirement.

*The Utah Division of Radiation Control has posted the revised Approval Letter and the Public Participation Summary on the EnergySolutions' issues page at <http://www.radiationcontrol.utah.gov/EnSolutions/currentactivities.htm#rpcgwdp0312>.*

*For additional information, please contact Rusty Lundberg at (801) 535-4257 or at [rlundberg@utah.gov](mailto:rlundberg@utah.gov) or John Lundquist at (801) 536-4250 or at [jlundquist@utah.gov](mailto:jlundquist@utah.gov).*